

Application No.: 09/646,807

2

Docket No.: 524322000321

AMENDMENTS**Amendments to the Claims:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-26 (Canceled).

Claim 27 (Currently Amended) ~~An isolated synthetic gene comprising: a dispersed or foreign~~ deoxyribonucleotide molecule including comprising at least two copies of a target gene or region thereof structural gene sequence which are at least 80% identical substantially identical to the nucleotide sequence of ~~said the~~ target gene or region thereof,

~~wherein at least one said a first~~ copy of said structural gene sequence is in the sense orientation, and a second at least one other said copy of said structural gene sequence is in the antisense orientation; and

~~wherein the isolated deoxyribonucleotide molecule synthetic gene~~ is capable of post-transcriptionally repressing, delaying, or otherwise reducing expression of said target gene when expressed in ~~an animal, tissue, or organ~~ a mammalian cell by sequence-specific degradation of a RNA transcript of the target gene by an endogenous system of the mammalian cell.

Claim 28 (Currently Amended) ~~The isolated deoxyribonucleotide molecule synthetic gene according to claim 27, wherein the target gene is endogenous to the genome of the animal mammalian cell, tissue, organ or organism.~~

Claims 29-33 (Canceled).

Claim 34 (Currently Amended) ~~The isolated deoxyribonucleotide molecule synthetic gene according to claim 27 wherein the target gene is porcine α -1,3-galactosyltransferase gene.~~

Application No.: 09/646,807

3

Docket No.: 524322000321

Claim 35 (Currently Amended) The isolated deoxyribonucleotide molecule synthetic gene according to claim 34, wherein the at least two copies of the ~~structural gene sequence~~ are placed operably under the control of a single promoter sequence.

Claim 36 (Currently Amended) The isolated deoxyribonucleotide molecule synthetic gene according to claim 27, wherein each said copy of the ~~structural gene sequence~~ is separately and operably linked to a separate promoter sequence.

Claim 37 (Currently Amended) The isolated deoxyribonucleotide molecule synthetic gene according to claim 36, wherein each said copy of the ~~structural gene sequence~~ is operably linked to spatially separate promoter sequences.

Claim 38 (Currently Amended) A genetic construct comprising the isolated deoxyribonucleotide molecule synthetic gene according to claim 27.

Claim 39-47 (Canceled).

Claim 48 (Currently Amended) The isolated deoxyribonucleotide molecule synthetic gene according to claim 35, wherein the promoter sequence is the CMV promoter sequence.

Claim 49 (New) The isolated deoxyribonucleotide molecule according to claim 27 wherein said at least two copies are at least 85% identical to the target gene or the region thereof.

Claim 50 (New) The isolated deoxyribonucleotide molecule according to claim 27 wherein said at least two copies are at least 90% identical to the target gene or the region thereof.

Claim 51 (New) The isolated deoxyribonucleotide molecule according to claim 27 wherein said at least two copies are at least 95% identical to the target gene or the region thereof.

Claim 52 (New) The isolated deoxyribonucleotide molecule according to claim 27 wherein said at least two copies are 100% identical to the target gene or the region thereof.

Application No.: 09/646,807

4

Docket No.: 524322000321

Claim 53 (New) The isolated deoxyribonucleotide molecule according to claim 27 wherein first copy and second copy form an inverted repeat in the same nucleic acid strand.

Claim 54 (New) The isolated deoxyribonucleotide molecule according to claim 27 wherein said at least two copies are separated by a nucleic acid-containing stuffer fragment.

Claim 55 (New) The isolated deoxyribonucleotide molecule according to claim 27 wherein the mammalian cell is murine.

Claim 56 (New) An isolated genetic construct which is capable of delaying, repressing or otherwise reducing the expression of a target gene in a mammal cell which is transfected with said genetic construct, said genetic construct comprising at least two copies of a target gene sequence or region thereof, wherein said at least two copies are at least 80% identical to said target gene or region thereof, and wherein said at least two copies are placed operably under the control of a single promoter sequence which is operable in said cell, wherein at least one copy is placed operably in the sense orientation under the control of said promoter sequence and wherein at least one other copy is placed operably in the antisense orientation under the control of said promoter sequence.

Claim 57 (New) An isolated genetic construct which is capable of delaying, repressing or otherwise reducing the expression of a target gene in a mammal cell which is transfected with said genetic construct, wherein said genetic construct comprises at least two copies of a target gene or region thereof and each copy is separately placed under the control of a promoter which is operable in said cell, and wherein said copies are at least 80% identical to said target gene or a region thereof, wherein at least one copy is placed operably in the sense orientation under the control of an individual promoter sequence, and wherein at least one other copy is placed operably in the antisense orientation under the control of another individual promoter sequence.

Claim 58 (New) The isolated genetic construct of claim 56 wherein said at least one copy placed in the sense orientation relative to said promoter and said at least one other copy of

Application No.: 09/646,807

5

Docket No.: 524322000321.

said structural gene sequence placed in the antisense orientation relative to said promoter are spaced from each other by a nucleic acid stuffer fragment.

Claim 59 (New) The isolated genetic construct according to any one of claims 56-58 wherein said region of the target gene is 20 to 30 nucleotides long.

Claim 60 (New) The isolated genetic construct according to any one of claims 56-58 wherein said region of the target gene is at least 30 nucleotides long.

Claim 61 (New) The isolated genetic construct according to any one of claims 56-58 wherein said at least two copies are identical to said target gene or region thereof.

Claim 62 (New) A mammal cell comprising the genetic construct according to claim 59.

Claim 63 (New) A mammal cell comprising the genetic construct according to claim 60.

Claim 64 (New) A mammal cell comprising the genetic construct according to claim 61.